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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,688	10/22/2003	Mikhail Kejzelman	003301-052	4914
21839	7590	11/17/2004	EXAMINER	
BURNS DOANE SWECKER & MATHIS L L P			MAI, NGOCLAN THI	
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ALEXANDRIA, VA 22313-1404			PAPER NUMBER	
			1742	

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/689,688

Applicant(s)

KEJZELMAN ET AL.

Examiner

Ngoclan T. Mai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-41 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 18-19, 21-27, 31, 33-34, and 36-38 is/are rejected.
7) ☒ Claim(s) 20, 28-30, 32, 35 and 39-41 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/2/04.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 21-23, 36-38 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 21-23 and 36-38 recite the limitation "alkoxy silane" in line 1. There is insufficient antecedent basis for this limitation in the claims.

Claim 41 is indefinite because it is depended on cancel claim 6.

Claim Objections

3. Claims 18, 20, 33 and 35 are objected to because of the following informalities: the term "alkylakoxy" in claim 18, line 3 and claim 33, line 2 should be "alkylalkoxy" and the terms "metoxy" or "trimetoxo" in claim 20, lines 2-3 and claim 35, lines 2-3 should be "methoxy" or "trimethoxy", respectively. Appropriate corrections are required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 18-19, 24-25, 33-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Ueta et al.

Ueta et al disclose an iron-based powder composition comprising an iron-based powder coated with a coating containing silicon compound and pigment, wherein the silicon compound can be an alkoxysilane, which includes decyltrimethoxysilane and decyltriethoxysilane, see paragraph [0021], [0080] – [0081]. Ueta et al thus teach silane having the alkyl group of 10 carbon atoms. Ueta et al disclose using particles of raw material, i.e., iron-based powder, having a large particle diameter, preferably more than 100 microns when a core having a high permeability, high magnetic flux density and remarkably reduced hysteresis loss is desired. See [0101]. Since the iron based powder composition taught by Ueta et al contains the claimed silicon compound, the silicon compound is expected to impart lubricability to the iron-base powder. Note that since 100 microns size is preferred, there is no powder having particle size below 45 microns.

with regarding claims 24-25, Ueta et al disclose powder having the claimed particle sizes in Table 1, powder-containing iron, No. e,

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21-23, 26-27 and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueta et al.

The difference between the claims and Ueta et al is that Ueta et al do not specifically teach the amount of silicon compound.

Ueta et al teach the total amount of the coating is from 0.01 to 25% by mass relative to the total amount of the iron based powder and the ratio of silicon compound to pigment is from 0.01 to 4.0, see [0023] .

Since Ueta et al. teach composition iron based composition with silicon compound whose wt% ranges overlap those recited by the claims; such overlapping range renders applicant's composition prima facie obvious despite difference in non-overlapping areas, see *In re Malagari*, 499 F.2d 1297, 1303, 182 USPQ 549, 553 (CCPA 1974). Furthermore, in view of the overlapping in composition, the composition taught by the prior art would be expected to possess the same properties of applicant's claimed composition. See *In re Best*, 195 USPQ 430.

To distinguish over prior art, applicant needs to demonstrate (e.g. by comparative test data) that the more narrowly claimed ranges for the alloying constituents are somehow critical and productive of new and unexpected results.

With regarding claims 26-27, while Ueta et al do not specifically teach at least 40 and at least 60% of the iron-based powder consists of particle having a particle size above about 212, Ueta et al teach that particles having more than 100 microns in size are desired when a core having a high permeability, high magnetic flux density and remarkably reduced hysteresis loss is desired. Determination of an optimum or preferred particle size and appropriate amount of powder having that particle size to obtain magnetic of desired properties is within the skill in the art and therefore would have been obvious.

7. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueta et al in view of Matsutani et al.

Ueta et al teach forming powder core by compacting iron-based powder composition comprising an iron-based powder coated with a coating containing silicon compound and pigment at pressing pressure of 980 Mpa, see paragraph [0174]. Note While there is no teaching of ejection the core after compaction, such is inherently performed since it must be taken out of the compacting machine for further processing or use.

The difference between the claim and Ueta et al is that Ueta et al do not teach uniaxial compacting the powder composition in a die.

Matsutani et al disclose a method for making core pieces from composite magnetic material by uniaxially pressing the composite magnetic material at a pressure of 10 t/cm² (980 Mpa), see col. 8, lines 15-19.


Since Ueta et al's method is for making core pieces, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ known pressing technique for pressing the iron-base powder composition taught by Ueta et al. Employing well known uniaxial pressing as taught by Matsutani et al. for compacting iron-base powder of taught by Ueta et al. to form magnetic core, therefore, is obvious.

8. Claims 20, 28-30, 32, 35, 39-41 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. These claims contain subject matters that are not taught or suggested or made obvious by the teaching of related prior art.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoclan T. Mai whose telephone number is (571) 272-1246. The examiner can normally be reached on 9:30-6:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ngoelan T. Mai
Primary Examiner
Art Unit 1742

n.m.